

REMARKS/ARGUMENTS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the amendments and remarks herewith, which place the application into condition for allowance. The present amendment is being made to facilitate prosecution of the application.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 1, and 5-9 are currently pending. Claims 1, 8 and 9 are independent and are hereby amended. No new matter has been introduced. Support for this amendment is provided throughout the Specification as originally filed.

Changes to the claims are not made for the purpose of patentability within the meaning of 35 U.S.C. §101, §102, §103, or §112. Rather, these changes are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

II. REJECTIONS UNDER 35 U.S.C. §112

Claims 1, and 5-9 were rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. The Office Action asserts, there is no support for the claim limitation that a first candidate words have a number of phonemes and syllables equal to or above the number of phonemes and syllables of second candidate words. OA at pages 5-6.

While Applicants do not agree with the assertion in the Office Action, the claims have been amended to avoid the rejection. Claim 1 is representative and recites, *inter alia*:

"... candidate first words based on the word score have a number of phonemes and syllables above the number of phonemes and syllables of the candidate second words."

Applicants respectfully request withdrawal of the 35 U.S.C. §112 rejection of the claims.

III. REJECTIONS UNDER 35 U.S.C. §103

Claims 1-2 and 7-8 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,218,668 to Higgins et al. (hereinafter merely "Higgins") in view of Doyle ("Progressive Word Hypothesis Reduction for Very Large Vocabulary Continuous Speech Recognition," 1997); and

Claims 5 and 6 were rejected under 35 U.S.C. §103 as allegedly unpatentable over Higgins and Doyle and further in view of U.S. Patent No. 5,960,447 to Holt et al. (hereinafter merely "Holt").

Applicants respectfully traverse this rejection.

Independent claim 1 is representative and recites, *inter alia*:

"characteristic value storage means for storing characteristic values and an extraction time point associated with each characteristic value;

...
word concatenation information storage means for storing word concatenation information that is the relation of input words of a word sequence representing the results of speech recognition and includes acoustic scores, linguistic scores, time points of the beginning end and terminal end of speech portions associated with respective input words;

...
selection means for selecting one or more candidate first words from the plurality of input words to be processed by speech recognition processing, based on the concatenation information, and a word score that represents an evaluation of acoustic scores and language scores

calculated using said characteristic values, and for selecting one or more candidate second words from the plurality of input words not based on the acoustic score, the candidate second words having unstable acoustic characteristic values with a number of phonemes and syllables less than a preset value." (emphasis added)

In the invention as claimed in claim 1, the characteristic value storage unit stores the sequence of characteristic values, provided by a controller, until the results of the user speech recognition are obtained. At the same time, the controller sends the time point of acquisition of the characteristic values output by the characteristic value extraction unit (termed the extraction time point) referenced to the start time point of a speech domain, to the characteristic value storage unit, along with the characteristic value. The characteristic value storage unit stores the characteristic value along with the extraction time point. The characteristic values and the extraction time point, stored in the characteristic value storage unit, are referenced as necessary during word pre-selection by final the matching.

The present device performs preliminary word selection of selecting one or more words, processed for matching, using the characteristic values stored in the characteristic value storage unit, based on the word concatenation information. The word concatenation information is defined in the specification (and in the claims) as, "the relation (concatenation or union) of component words of the word sequence representing the ultimate result of speech recognition, and includes the acoustic score and the language score of each word as well as time points of the beginning end and terminal end of the speech portions associated with the respective words."

Words obtained as a result of the pre-selection word selection, are matched using the characteristic information referencing the word concatenation information. Publ. App. pars. [0053]-[0057]

None of the references, Higgins, Doyle and Holt describe characteristic information of the input speech that comprises word characteristics with time points of the beginning end and terminal end of the words of the word sequence of the input speech as opposed to merely the time of the phonemes. That is, none of the references discusses word concatenation information that is "the relation of input words of a word sequence representing the results of speech recognition and includes acoustic scores, linguistic scores, time points of the beginning end and terminal end of speech portions associated with respective input words" as recited in claim 1.

Neither Higgins, Doyle, nor Holt taken alone or in combination teaches or renders predictable the elements discussed above for independent claim 1.

For reasons similar or somewhat similar to those described above with regard to independent claim 1, independent claims 8 and 9 are also believed to be patentable.

IV. DEPENDENT CLAIMS

The other claims are dependent from one of the claims discussed above and are therefore believed patentable for at least the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

CONCLUSION

Claims 1 and 5-9 are in condition for allowance. In the event the Examiner disagrees with any of statements appearing above with respect to the disclosure in the cited reference, or references, it is respectfully requested that the Examiner specifically indicate those portions of the reference, or references, providing the basis for a contrary view.

Please charge any additional fees that may be needed, and credit any overpayment, to our Deposit Account No. 50-0320.

In view of the foregoing amendments and remarks, it is believed that all of the claims in this application are patentable and Applicants respectfully request early passage to issue of the present application.

Respectfully submitted,

FROMMER LAWRENCE & HAUG LLP
Attorneys for Applicants

By:



Paul A. Levy
Reg. No. 45,748
(212) 588-0800